Montana Laboratory Sentinel

Updates from the MT Laboratory Services Bureau MONTANA **http://healthlab.hhs.mt.gov/ 04/13/10**

Tularemia !

We all need to be vigilant of possible bioterrorism agents (*Bacillus* spp., *Yersinia* spp., *Brucella* spp., *Burkholderia* spp., and *Francisella tularensis)*. These "Select Agents" could be "weaponized" by terrorists and disseminated. However, in a rural setting such as Montana, **people contract these naturally occurring bacteria while in contact with domestic or wild animals**. Ticks, deer flies and rabbits are common sources of infection. The clinical laboratory would be the first to detect a cluster of cases of an organism. As a "Sentinel Laboratory" you sound the alarm by contacting your LRN Reference Laboratory (MT Public Health Laboratory - MTPHL).

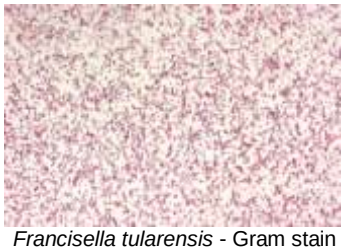
The microbiologists at MTPHL *must be alerted by phone (800-821-7284) AND alerted with a notation on the requisition form* submitted with the culture and/or isolate. Basic information such as "gram negative coccobacillus, weakly catalase positive, oxidase negative, and *F. tularensis* suspect" noted on the requisition form will alert the microbiologist to take extra safety precautions AND expedite identification.

Every Sentinel Laboratory should incorporate these guidelines into its procedure manuals: "Sentinel Level Clinical Microbiology Laboratory Guidelines" (Agents of Bioterrorism, Packaging & Shipping, and a BT Readiness Plan)
http://www.asm.org/index.php?option=com_content&view=article&id=6342&Itemid=639
Additional information on the "Select Agents of Bioterrorism" is found at: http://www.bt.cdc.gov/hazards-specific.asp . Attached is a flow chart which will help your laboratory to "Rule Out or Refer" isolates to MTPHL.

Key Characteristics of Francisella tularensis

- ✓ Isolate from blood, lymph node aspirate, skin ulcer or respiratory specimen
- ✓ Gram stain morphology:
  - Tiny, gram-negative coccobacillus
  - May gram-stain stain weakly
  - Often difficult to see individual cells
- ✓ Grows slowly on chocolate agar
- ✓ Grows poorly or not at all on blood agar at 72 hours
- ✓ Oxidase - negative
- ✓ Urease - negative
- ✓ Catalase - weak positive—CAUTION-produces aerosol
- ✓ *Beta*-lactamase - positive
- ✓ XV or satellite - negative (XV factors are not required for growth)

In the event you cannot rule-out *Francisella tularensis,*
Please call Montana Public Health Laboratory at 800-821-7284
to discuss further actions and precautions.



Francisella tularensis - Gram stain
tiny gram negative coccobacilli

Francisella tularensis - Pin-point colony @ 24 hr on chocolate agar

Francisella tularensis
Growth @ 48 hrs on chocolate agar

Francisella tularensis
Growth @ 72 hrs on chocolate agar

BT Wet Workshop in Helena – Friday, July 30, 2010

The materials and demonstrations are designed to help clinical microbiologists recognize and "Rule Out or Refer" *Bacillus* spp., *Yersinia* spp., *Brucella* spp., *Burkholderia* spp., *Francisella tularensis*) and similar organisms. Registration information will follow. Kathy Martinka, kmartinka@mt.gov 406-444-0944
Bioterrorism Laboratory Preparedness Coordinator

Francisella tularensis

is a dangerous, highly virulent organism and it should not be manipulated on an open bench. Over 400 laboratory-acquired infections have occurred.

MT Communicable Disease Update Week 13 Ending 04/03/10

This newsletter is produced by the Montana Communicable Disease Epidemiology Program.
Questions regarding its content should be directed to 406.444.0273 (24/7/365).
http://cdepi.hhs.mt.gov

DISEASE INFORMATION

Summary – Week 13 – Ending 04/03/10 – Disease reports received at DPHHS during the reporting period March 28 – April 3, 2010 included the following:

- Vaccine Preventable Diseases: Hepatitis A (1), Varicella (1)
- Enteric Diseases: Campylobacteriosis (1)
- Other Conditions: Viral Meningitis (1)

NOTE: The report has multiple pages reflecting the following information: (1) vaccine preventable and enteric diseases YTD; (2) other communicable diseases YTD; (3) cases just this week; (4) clusters and outbreaks; and (5) an STD summary.

NEW! Surveillance Snippet – Two recent cases of hepatitis A in travelers serve as a reminder of the importance of hepatitis A vaccination prior to international travel to or adoption of children from high endemicity areas. Hepatitis A is one of the most common vaccine-preventable infections acquired during travel. Most travel-related cases in the U.S. (72%) in 2006 were associated with travel to Mexico and Central/South America. All susceptible persons traveling to or working in countries that have high or intermediate hepatitis A endemicity should be vaccinated before departure.
http://wwwnc.cdc.gov/travel/yellowbook/2010/chapter-2/hepatitis-a.aspx
http://www.immunize.org/askexperts/experts_hepa.asp#special

THE "BUZZ"

Influenza

Montana – Activity level in Montana for week 13 is **SPORADIC.** **NEW!** After a 10 week lull in influenza activity, the Montana Public Health Laboratory has recently confirmed influenza H1N1 in four Montana residents. PCR confirmed cases are from Gallatin (2), Madison (1), and Missoula (1) Counties ranging in age from Two of the four cases had recent out-of-state travel. To date, none have been hospitalized.

This unexpected increase in activity serves as a reminder that we are still in the traditional influenza season and surveillance for all types of influenza should be maintained. The possibility exists that we may continue to see influenza in Montana for months to come.

IMPORTANT!
Please remind providers to send specimens to the Montana Public Health Laboratory for PCR testing, regardless of rapid influenza test results, if the individual presents with an influenza-like-illness and a definitive diagnosis is desired. ***Rapid influenza tests should be interpreted with caution at this time.*** Per IDSA Guidelines, a confirmatory test such as PCR or viral culture should be considered when the prevalence of influenza is low (http://www.journals.uchicago.edu/doi/pdf/10.1086/598513).

Current information on influenza testing by the Montana Public Health Laboratory:
http://www.dphhs.mt.gov/PHSD/Lab/environ-lab-index.shtml.

Most importantly, use this increase in influenza activity as an opportunity to continue to vaccinate residents for influenza!

Influenza in Pregnancy – A recent MMWR report discusses H1N1 infection among pregnant women in NYC and identified both increased risk for hospitalization and ICU admission compared to non-pregnant women, as well as several missed opportunities for prevention. Current recommendations for treatment and prevention of influenza in pregnant women are available at www.cdc.gov/H1N1flu/pregnancy/antiviral_messages.htm.

United States - During week 13 (04/03/10), most key flu indicators declined slightly from the previous week. (http://www.cdc.gov/flu/weekly/usmap.htm)

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INFORMATION / ANNOUNCEMENTS

NEW! **Measles Outbreak British Columbia** – As of April 8, there are 29 confirmed cases of measles in British Columbia. None of the cases identified to date had two doses of measles vaccine, which is needed for full protection. (http://www.bccdc.ca/default.htm) *The diagnosis of measles should be considered in any person with a generalized maculopapular rash lasting ≥ 3 days, a temperature ≥ 101°F (38.3°C), and cough, coryza, or conjunctivitis. Immunocompromised patients may not exhibit rash or may exhibit an atypical rash.* Contact local public health immediately to report a suspected case (do not wait for serological confirmation to report) and for assistance with diagnostic testing through the Montana Public Health Laboratory. (http://www.cdc.gov/measles/index.html)

NEW! **"What's New" at http://cdepi.hhs.mt.gov**

- **Communicable Disease Summary: A Guide for Schools** – The Communicable Disease Summary: A Guide for Schools has been mailed to all Montana K-12 schools, local health departments and infection preventionists. http://www.dphhs.mt.gov/PHSD/epidemiology/schools.shtml
- **Communicable Diseases Stats and Facts: 2008** - This first ever report provides a summary of reportable communicable disease activity in Montana for 2008, including highlights from the year. The 2009 report will be released in June. http://www.dphhs.mt.gov/PHSD/epidemiology/documents/AnnualReport2008FINAL_03_31_2010.pdf
- **Surveillance Snapshot** – The most recent Surveillance Snapshot is a review about norovirus in Montana. http://www.dphhs.mt.gov/PHSD/epidemiology/SurveillanceSnapshots.shtml

NEW! **Syphilis –** The March issue of Montana Public Health reviews the diagnosis and treatment of syphilis. http://www.dphhs.mt.gov/PHSD/prevention_opps/pdf/MPHMar2010.pdf

Animal Bites to Humans on the Increase **-** As spring progresses into summer, human and domestic pet interaction with wildlife increases. Though it may be tempting to handle or assist distressed wildlife, abnormal wildlife behavior in species like bats, skunks, and foxes (e.g., nocturnal animal out in the daytime, lethargic, or aggressive) may be a sign of rabies infection. Rabies infections are sometimes detected in MT wildlife and transmission to domestic pets and humans through the saliva of an infected animal is possible. Report all animal bites or possible rabies exposures to the local health department. Information about rabies and postexposure prophylaxis (PEP): http://www.cdc.gov/rabies/index.html.

Hantavirus **-** Hantavirus is transmitted to humans through exposure to infected rodent tissues or excrement, including dried feces. Hantaviruses can cause a rare but deadly disease called hantavirus pulmonary syndrome (HPS). People get HPS when they breath in hantaviruses. This can happen when rodent urine and droppings that contain a hantavirus are stirred up into the air. People can also become infected by touching their eyes, nose, or mouth after they touch rodent urine, droppings, or nesting materials that contain the virus. HPS may also be transmitted through a mouse or rat bite. Activities that can put people at risk for HPS include: Improperly cleaning up mouse and rat urine, droppings, and nests, cleaning a shed or cabin that has been closed for some time, and working in areas where mice and rats may live (such as barns). To prevent exposure to hantaviruses, rodents should be excluded from the home place, and the following precautions should be used when cleaning areas where rodents may reside:

- Wear rubber or plastic gloves when cleaning rodent infested areas
- Spray urine and droppings with a disinfectant or a mixture of bleach and water thoroughly soaking the area, and let stand for 5 minutes
- Use a paper towel to wipe up the urine or droppings and discard in the garbage
- Mop or sponge the area with a disinfectant or bleach solution
- Wash gloved hands with soap and water or spray a disinfectant or bleach solution on gloves before taking them off
- Wash hands with soap and warm water after taking off your gloves.

For more information about hantaviruses, visit: http://www.cdc.gov/ncidod/diseases/hanta/hps/index.htm